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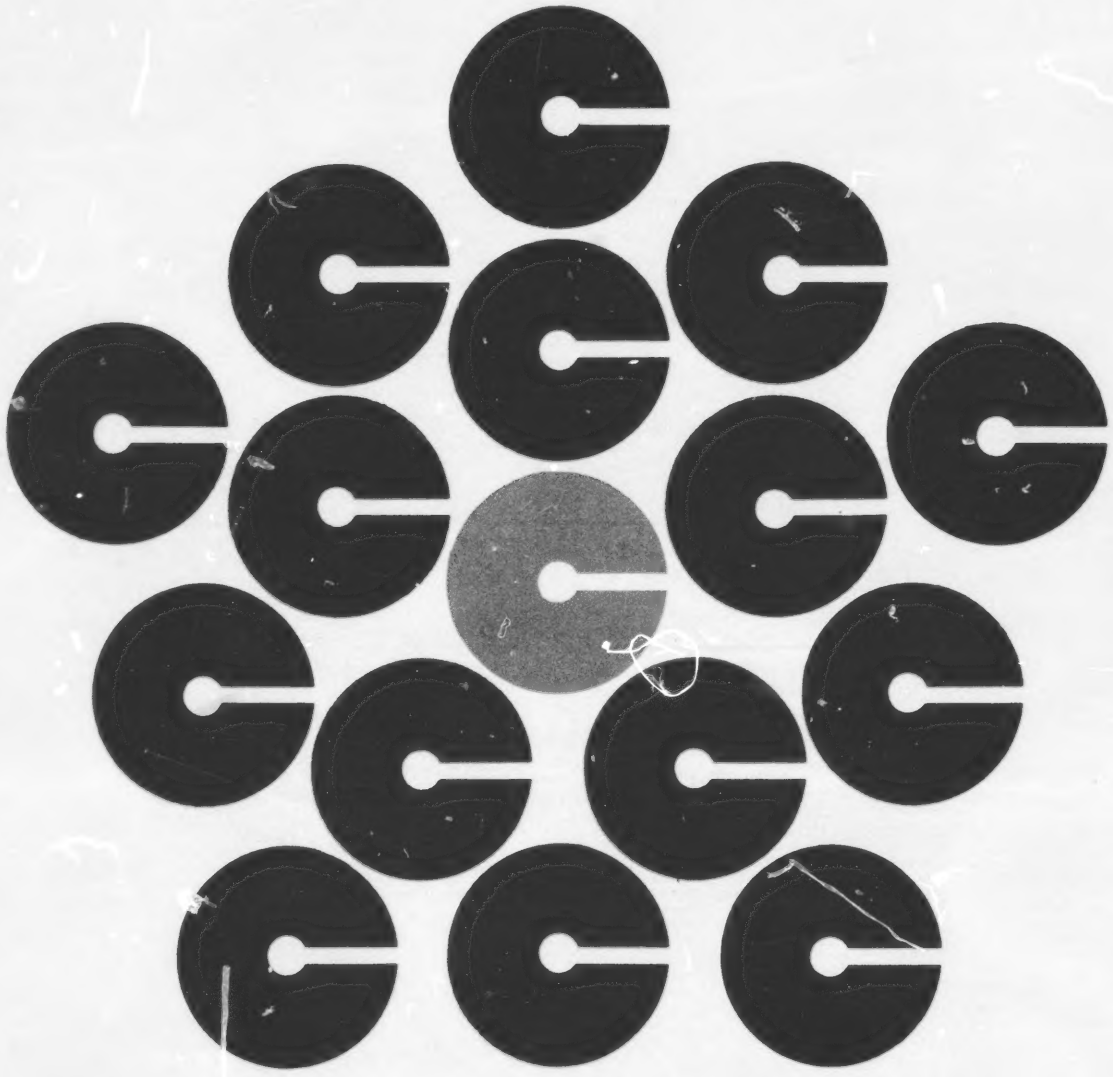
Competency-Based Adult Education: A Challenge for the 80s

By Carol Kasworm



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- Operating information systems and services
- Conducting leadership development and training programs

Information Series No. 208

COMPETENCY-BASED ADULT EDUCATION:
A CHALLENGE OF THE 80s

written by

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FOREWORD

The Educational Resources Information Center on Adult, Career, and Vocational Education (ERIC/ACVE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered in the ERIC data base. This paper should be of particular interest to adult basic education administrators and teachers, state agency staff, graduate students, and faculty in adult education.

The profession is indebted to Carol Kasworm for her scholarship in the preparation of this paper. Recognition also is due Travis Shipp, Indiana University; Russell Wilson, Auburn University; and Nina Selz, The National Center for Research in Vocational Education, for their critical review of the manuscript prior to its final revision and publication. Robert D. Bhaerman, Assistant Director for Career Education at the ERIC Clearinghouse on Adult, Career, and Vocational Education, coordinated the publication's development.

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The National Center for Research
in Vocational Education

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This paper is a descriptive presentation of the state-of-the-art of competency-based adult education (CBAE). Readers are provided first with a brief history of the development of the concept and are presented with basic terminology. Then, because CBAE is multi-dimensional, varied notions of functional adult education are discussed and major strands of diversified program and instructional processes are described. In addition, administrative perspectives and current research issues are presented. The paper provides background for understanding the current status and direction of several CBAE programs. It reflects the current base of limited written resources and the supplementing of discussions with personal communication. It presents an overview of the nature of CBAE, the foundations of a CBAE process, the scope of CBAE systems, teaching/learning strategies, administrative trends and issues, and the current state of research in this area. Tables illustrate (1) APL model of functional competency, examples of tasks, and (2) five-state comparison of adult alternative programs. Appended materials include a list of potential resources concerning programs, bibliographies and product listings, and suggested readings. (CT)

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PREFACE

Competency-Based Adult Education (CBAE) is becoming recognized as a viable process and approach for adult literacy programs. However, because of recent developments in this field and its diverse, segmented activities, many practitioners and lay persons are unaware of its potential program impact. Many persons lack information concerning elements of a competency-based education strategy, in general, as well as the specific program structures of CBAE activities. This paper is designed to address these informational needs.

Competency-Based Adult Education: A Challenge of the 80s is a descriptive presentation of the state-of-the-art of competency-based adult education. Readers are provided first with a brief history of the development of the concept and are presented with basic terminology. Then, because competency-based adult education is multi-dimensional, varied notions of functional competency are discussed and major strands of diversified program and instructional processes are described. In addition, administrative perspectives and current research issues are presented.

The paper provides background for understanding the current status and direction of several competency-based adult education programs. However, as with any state-of-the-art discussion, certain limitations should be noted. Some limitations result from an attempt to present a balanced overview of current practices which are in process of pilot-testing, of refinement, and, often, major revision. Program and instructional developments are not static; they have been temporarily "captured at one point in time" for descriptive understanding. Consequently, some program information may not be comprehensive enough for

in-depth analysis. As another limiting factor, practitioners who are creating and implementing CBAE typically do not provide sufficient written documentation, evaluation, and discussion of their efforts. The paper reflects the current base of limited written resources and the supplementing of discussions with personal communication with these projects and, when appropriate, with other documentation.

CBAE has been perceived by some adult educators as a controversial addition to adult education. Philosophies of instruction, operational emphases and program articulation, and learner and program outcomes continue to be discussed and debated. Adult educators are continuing to examine critically the background research, credibility, and impact of competency-based approaches. This paper will not attempt to present all of the philosophies and emphases in depth nor compare the strengths and weaknesses of each. Additional authors should pursue these areas in the future. This paper will, however, present an <u>overview</u> of the nature of CBAE, the foundations of a CBAE process, the scope of CBAE systems, teaching/learning strategies, administrative trends and issues, and the current state of research in this area.

Competency-based adult education can represent an exciting addition to mastery learning, flexible program formats, and functional literacy concepts for adults. It offers great promise for the articulation of program and learner outcomes through more systematic instruction. It can provide significant opportunities for educational programs to offer flexible and responsive learning environments and experiences to adult learners.

INTRODUCTION

"That one man should die ignorant who had the capacity to learn, this I call a tragedy." Thomas Carlyle.

"Why do we always get the thorny stem, rather than the flower of the rose?" Student comment in an adult basic education class.

Adult literacy education has espoused the mission of serving the disadvantaged However, often the vision and the reality of its efforts resided in far separate worlds. During the years of the 1970s, adult literacy education incorporated stronger funding, new outreach efforts, innovative and (hopefully) more effective delivery systems and instructional strategies.

One key development during these years was the competency-based approach to adult education. This new perspective appeared to offer better solutions for educational and programmatic outreach in adult basic education. In the early 1970s, two separate, yet interactive developments focused national interest on and practitioner support for competency-based approaches to adult basic education. Attention was focused on the needs for a concept of literacy appropriate to adults and a more flexible, accessible, and relevant process to service diverse adult illiterate learners.

The first development addressed a concept of literacy in relation to the life orientation of the adult. During the 1900s, American society had undergone significant shifting of resources and expectations towards defining the high school diploma as the "benchmark of education literacy" (Hunter & Harmon, 1979). This rising set of expectations was most dramatically

shown through comparison of high school graduation rates of 12 percent in 1900 to 78 percent in 1974 (Berg, 1971; Cook, 1977). Within adult basic education, this similar rising expectation of grade level completion and a possible educational credential also was occurring. In the 1900 census, an illiterate was identified as any person ten years of age or older who was unable to read or write in his or her native language. In 1959, the Bureau of Census conducted a specific population survey on literacy and educational attainment, defining illiteracy as the inability to read and write a simple message in English or in any other language and designating a functioning level of literacy as a fifth-grade level of skills (Cook, 1977). New adult education federal legislation in the 1970s expanded the mandate of adult literacy education to encompass "at least the completion of secondary school." Thus, through various federal agency activities and mandates, the concept of literacy expanded from a basic skills orientation to encompass grade level completion and, finally, to include the completion of a secondary school education or its equivalent.

This changing focus toward defining literacy in terms of higher levels of educational attainment and equating it with the traditional secondary school curriculum seemed inappropriate in its application to all populations, especially the disadvantaged adult population. Should literacy requirements for adults be different from literacy requirements for children? Do disadvantaged adults have a different set of needs which affect the notion of literacy? How can adult education assist disadvantaged adults to be employable, less dependent upon the social welfare systems, and more fully equipped to cope with adult responsibilities? Traditional adult literacy approaches had not directly addressed these issues.

In August of 1970, the United States Office of Education issued a request for research projects that would establish a systematic definition of adult functional literacy. The Adult Performance Level (APL) Project at the University of Texas at Austin was funded to conduct this research investigation. This project called national attention to the concept of "adult functional literacy," as the ability to function effectively in today's society. In later research, this project created an estimated 64 million adults who were functionally illiterate (Adult Performance Level Staff, 1977).

The development of nontraditional approaches to serve adult learner needs was the second key impetus toward implementing competency-based adult education. The late 60s and early 70s were high innovation years for educational institutions. Relevancy, flexibility, and accessible learning were major goals for the modification of educational structures and processes.

Non-traditional education - education that rejects lockstep curricula, traditional graduated subject-level learning, and campus-bound classroom activity - had gained significant support. Until the 1970s, undereducated adults had only three major alternatives for gaining a secondary education - a traditional evening high school program, a correspondence course of study, or a high school equivalency instruction/testing program. These options were insufficient for many adults who found these programs either irrelevant to their situation or inaccessible to them. Some who went through these programs found that a high school equivalency diploma was not always an acceptable substitute for the traditional high school diploma.

In 1973, the Policy Institute of the Syracuse Research Corporation presented the Ford Foundation with a proposal for an alternative to a high school diploma. With strong educator leadership and direct input from representatives of adult basic education, labor, business, and the community, a developmental effort was undertaken to establish content areas of adult competency and guidelines for granting an external high school diploma. A New York State grant with federal backing was provided to develop the idea further and to establish a working model for an external high school diploma program (Nickse, 1979). The Regional Learning Service inaugurated the New York External High School diploma program oriented solely to adults. This program had no operational instructional classroom component. The core of this external approach was a defined set of competencies, assessment measures, and resource counseling and advisement center. This was followed in 1974 by the establishment of the experimental Monmouth Adult Education Compression Adult Diploma Program instituted by the New Jersey Department of Education (Niles, 1980). These nontraditional high school diploma programs offered new flexibility and relevance to adults. Utilizing competency-based processes, they provided a new, accessible approach for adults who desired both the knowledge and the credential.

Since these early major efforts, numerous local, state, and federal agencies and educational groups have joined in the creation and refinement of competency-based adult education. This paper provides an overview of the elements of this innovation. The current state of CBAE programs and processes, research and administrative issues, and key perspectives on functional competency and learning strategies are presented. It is hoped this paper will provide understanding and insights into the current scope and impact of competency-based adult education.

THE NATURE OF COMPETENCY-BASED EDUCATION

Competency-based adult education (CBAE) represents a diversity of forms, processes, and elements. As a concept, it is defined as "a performance-based process leading to demonstrated mastery of basic and life skills necessary for the individual to function proficiently in society" (Report of the USOE Invitational Workshop on Adult Competency Education, 1978, p. 1). In its ideal state, it has both specific program components - prescribed outcomes, pre- and post-assessment, functional literacy content, and certification of mastery - and specific program orientations, variable instructional structures or processes, and an adult learner orientation - which distinguish it as a unique educational program.

PROGRAM COMPONENTS OF CBAE

Identified and Stated Outcomes

All CBAE processes utilize prescribed objectives and outcomes. These objectives/outcomes are the "competencies", i.e., key information and skills that define the direction and scope of an individual's learning. The stated competencies have a base in research and are validated through either local, regional, or national efforts. The competencies represent the predetermined focus of instructional goals.

Preassessment and Postassessment

Entry and exit from a CBAE process occurs through a formalized assessment system. Entry or preassessment provides a diagnosis of skills and knowledge that either may have been previously learned or that must be addressed through future learning

activities. Postassessment determines the student's present level of skills and knowledge of the stated competencies of the program and certifies the student's final competence in the skills addressed by the program.

Functional Literacy

CBAE structures are generally grounded in functional literacy subject matter, "basic and life skills necessary for the individual to function proficiently in society." This integration of both basic and life skills is a key component of successful CBAE efforts.

There are many variations in the specific mixture and content of basic and life coping skills and knowledge. All CBAE programs stress the development of basic skills (reading, computation, writing, problem-solving, listening/viewing/speaking). Certain programs also incorporate competencies in interpersonal relations, cross-cultural relations (predominantly in English as a Second Language programs), and humanistic concerns.

Life skills competencies tend to focus on life roles such as employee, consumer, citizen, family member, healthy individual, and/or personal problem-solver. The nature of these competencies varies based upon the structure and results of the original, foundational research for the program, upon variations in regional location (cultural, ethnic, rural/urban differences), upon clientele service orientation (e.g., state welfare clients, rehabilitation clients, or non-English-speaking participants), and upon the perceived goal certification for the learner (high school diploma, GED preparation, vocational).

The functional literacy approach assumes that basic skills are learned through a focus in life-coping skills. For example, the Adult Performance Level (APL) Project has defined functional competency as a two-dimensional concept of an identified set of basic skills as they apply to five general knowledge or content areas. Table 1 outlines this concept and provides examples of the interaction of basic skills and knowledge within a functional literacy, life-coping orientation.

Certification of Mastery

Ideally, CBAE processes/programs should provide certification of mastery of competencies. Many CBAE programs have linked their efforts to an external or nontraditional high school diploma program. Thus, successful completion or mastery of the competencies certifies an adult for a high school diploma. Certain programs link mastery of their competencies to entry into other programs such as vocational training, conventional

TABLE 1

APL MODEL OF FUNCTIONAL COMPETENCY: EXAMPLES OF TASKS

General Knowledge and Content Areas:

Basic Skills:	Consumer Economics	Occupational Knowledge	Health	Community Resources	Government and Law
Reading	read an ad for a sale	read a job description	read first aid directions	read a movie schedule	read about your rights after arrest
Writing	fill in income tax form	complete a job application	write a menu	complete an application for community service	write your congressman
Speaking, Listening, Viewing	ask question of IRS	listen to an employer talk about a job	listen to a doctor's directions	use the telephone	describe an accident
Problem-Solving	decide which house to rent	decide which job suits you	decide when to call a doctor	use stamp machines in the post office	decide which candidate to vote for
Inter-personal relations	relate to a sales clerk	be successful in a job interview	interact with hospital personnel	ask directions	interact with police successfully
Computation	compute sales tax	calculate paycheck deductions	decide how many times a day to take a pill	calculate the time it takes to travel a distance	calculate the cost of a speeding ticket

high school diploma, or GED instructional preparation. Other programs offer a certificate of accomplishment for attainment of the designated skills and knowledge.

PROGRAM ORIENTATIONS OF CBAE

Variable Instructional Structures or Processes

Most CBAE programs do not prescribe one instructional process or method for their students. When knowledge, skills, and attitudes outcomes are prescribed and assessed through competencies, students may elect learning strategies from a wide array of differing approaches with the advice and help of teachers or assessors/counselors. Programs may utilize instructional modules, group presentations and discussions, self-directed learning, student-initiated performance activities, teacher-with-student or student-with student teaching/tutoring, and other uniquely suited learning strategies which best assist the student to gain competence. Certain CBAE programs have an established competence-oriented curriculum with individualized instructional materials (e.g., APL system). Certain systems provide educational brokering services to direct students to other community resources and courses for information and/or instruction (e.g., New York External High School Diploma Program). Certain programs offer a learning resource center approach which provides a variety of materials and media identified to provide instructional support for basic skills development (e.g., New Jersey MAECOM Adult Diploma Program). Lastly, a few programs offer small group and individualized instruction where students interact on a regular basis with teacher-student groupings.

The CBAE use of various instructional processes represents philosophical differences regarding program structure, adult learning styles, available community learning resources, and the outcomes of the program. The CBAE process strives to make maximum use of alternative learning and instructional processes in order to bring about attainment of competencies in the most effective manner. Although the specific competencies are prescribed, there is not a dominant instructional process, nor one specific instructional strategy for all students.

Adult Learner Orientation

Because of the focus on the disadvantaged adult learner, CBAE programs have attempted to integrate key concepts of effective and efficient learning in relation to the adult. For example, adults have significant work and family time commitments which may make it impossible for them to maintain

a regular classroom schedule or learning pace. Most CBAE programs attempt to present a flexible time orientation for student participation. Students may begin their learning at any time, progress in their learning of competencies at their own pace, and have opportunities to return to inadequately learned concepts or skills until mastery.

Adult educators often have lamented the enforced use of grade level categories, group-paced learning, and prescribed content with mandated skill level teaching for adults in adult basic education. The CBAE process monitors the student's level of knowledge and abilities in relation to the final competency level of the program. Students enter the process at their present assessed level. Certain students may have brought significant prior life experiences and academic skills into the program. Thus they require only minimal time and a focused learning commitment. These students who have limited proficiency will concentrate on a broader range and depth of competencies. However, in both cases, individuals are aware of the finite objectives and their current standing in relation to program completion. They all receive positive reinforcement and experience success in accomplishment of competencies as they progress towards mastery of the objectives. Thus each student, in a sense, has a unique composition of learning experiences in relation to his or her skill level. It is this relationship between experiences and skills that can be used to guide the student towards mastery.

Many adult literacy programs provide individualized instruction - learning experiences that allow for self-pacing and regular corrective feedback. Effective CBAE programs also attempt to provide "personalized instruction." Personalized instruction not only focuses on the individualization of learning, but provides learning experiences that are presented in relation to the learner's personal and immediate goals and needs (Hall & Jones, 1976). Capitalizing on the adult learner's need for relevant and immediate life task problem-solving, personalized instruction assumes maximum flexibility by beginning with those life-coping competencies of immediate priority and concern to learners at the level of their present skills.

The nature of CBAE in its ideal state is typified by the program components - identified outcomes, assessment systems, functional literacy skills, and certification of mastery - and by the program orientations - variable instructional processes and adult learner orientation. A few CBAE programs have most of these elements in operation and are quickly incorporating the remaining elements to form a complete CBAE process. However, many programs are either in process of adapting present programs to CBAE principles or have only partially committed their

structure to a CBAE approach. These programs typically have two or three of the above stated elements. Lastly, some programs focus upon outcome objectives or functional literacy skills, yet they do not support or emulate the philosophy of CBAE. As with any innovation, there are many levels and varieties of application of the concepts and structure of CBAE to local adult education programs.

FOUNDATIONS OF A COMPETENCY-BASED EDUCATION PROCESS

CBAE programs are grounded in an explicit set of knowledge and skill outcomes known as functional competencies. These functional competencies are derived from varied research efforts to identify the composition of "functional literacy" and represent the subject matter for learning outcomes. One of the more heated debates within CBAE ranks concerns the definition of functional literacy, the various sets of functional competencies among programs, and which of these sets is the most sufficient, relevant, and valid for adult life requirements in our society.

MODELS OF FUNCTIONAL COMPETENCY

There are, at present, three major variations of defined sets of functional competencies with application to CBAE programs. These three variations are illustrated by the Adult Performance Level (APL) Project, the New York External High School Diploma Program, and the California model.

The Adult Performance Level Project specifies functional competencies oriented to life-coping skills in today's society. These competency objectives were developed through a literature search, a survey of state and federal agencies and foundations, regional conferences on adult needs, and interviews with undereducated and underemployed adults. From this research, functional competencies were defined as the integration of skills and knowledge, rather than cluster groupings of isolated knowledge and skill areas. APL functional competency is a two-dimensional concept in which an identified set of skills - reading, writing, speaking, listening, viewing, computation, problem-solving, and interpersonal relations - are applied to

five knowledge areas - consumer economics, occupational knowledge, health, community resources, and government and law (See Table 1). These forty-two competencies are utilized through the adult basic, pre-GED, and the APL diploma program (Shelton, 1979).

The New York State External High School Diploma Program is called an applied performance assessment system specifically developed to provide a non-traditional process for earning a high school diploma. The program regards competency as specific skills or knowledge through which a candidate can demonstrate performance mastery. The program has identified sixty-four basic skills and generalized competencies in communication, computation, social awareness, consumer awareness, scientific awareness, and occupational preparedness as well as specialized competencies in individualized occupational or vocational skills, advanced academic skills, and specified skills in areas such as art, music, and community organization. The generalized competencies are combined with specialized competencies to compose the total system of the diploma program.

The sixty-four basic competencies in this diploma program were initially defined by a task force of fourteen criteria-selected individuals. These were reviewed and refined by representatives of various community, business, education, and social groups. In its capacity as school board for the program, a regional committee of selected community leaders reviewed and critiqued the competencies for final approval (Nickse & McClure, in press). These competencies continue to be refined in their performance mastery application by educators working with disadvantaged adults in the diploma program.

California conducted a statewide analysis to identify necessary competencies for functional economic and educational success in today's society. Specific competencies were evolved from a literature review; a listing of generalized competencies; the composition of an organization framework; specific statements generated by an expert panel; and extensive review, rewriting, and editing (NOMOS, May, 1978. These five main categories include competencies in cultural, economic, health and safety, interpersonal, and social-political areas. Each category was further divided into subcategories with specific competency statements for each subcategory. The research incorporated work done through a pilot-tested competency-based diploma program in the Los Angeles Unified School District. This program defined thirty competencies, judged by adult students, adult education teachers and administrators, and community representatives to be most vital to a functional competency curriculum (McCune, 1979).

The California State Department of Education views the relationship of functional competency to adult education as a dynamic process

model. A competency at a particular level of performance is functional when it serves to meet a need of a person with particular characteristics (gender, age, ethnic group) in a particular set of circumstances (NOMOS, 1979). Within an instructional context, the program utilizes the previously identified competencies (skills and knowledges) and provides dialogues which teach clients to tailor the instruction and final competency outcomes to the learner's individual needs. In the CBAE high school diploma programs, all programs must validate by mandated state law a student's ability to read, write, and compute for functioning effectively in society. Other competency requirements of the diploma program are locally determined by each school board. In addition, each board is responsible for establishing the standards, levels of performance, and means of assessment (Styles, 1980).

Specialized Orientation to Functional Literacy

In addition to these three major projects, which have defined a finite set of functional competencies for a CBAE process, other groups and individuals have also looked at specific orientations in relation to functional competency concerns. Adkins identified specific social and psychological problems of disadvantaged adults. Analysis of this research created the categories of occupational and career problems, problems in living in community, problems of personal growth and development, problems in relating to others, medical and health problems, marriage and family problems, and problems of being a parent. According to Adkins, learning activities to deal with these concerns should evolve through a problem-solving process rather than a fixed, predetermined set of competency tasks.

A recent project in Utah identified values, knowledge, and skills necessary to be a competent economic manager of family resources. The National Center for Research in Vocational Education is currently conducting a study to identify necessary competencies in occupational knowledge and consumer economics. Northwest Regional Educational Laboratory is investigating situation-specific uses of literary skills of adults in local communities (Fischer, 1979).

The states of Oregon and Michigan have utilized functional competency concepts in defining curriculum areas with application to both the adult education clientele as well as the primary and secondary educational community. In its development of a competency-based adult high school diploma program, the state of Oregon incorporated recent state board of education graduation requirements. These requirements focused on six broadly stated life roles: individual, learner, producer, citizen, consumer, and family member (Nickse & McClure, in press). Michigan, in its

efforts to define and develop a set of life role competencies that all students should attain by the conclusion of their high school years, identified the major four areas of (1) employability and occupational skills, (2) personal and family management, (3) civic and social responsibilities, and (4) aesthetic and humanistic appreciation (Michigan Life Role Competencies, 1977).

In addition to these applications of functional competencies, thirty-three states have taken some form of action to mandate minimum competency standards for elementary and secondary students. All of the remaining states either have legislation pending or legislative or state board studies examining minimal competency requirements (Pipho, 1978). Because of this major activity, many state adult education programs are being challenged to conform to (and develop) minimum competency standard requirements for high school graduation. Of equal importance, competency-based adult education programs are drawing in secondary educators and school districts who desire to investigate the feasibility of incorporating competency-based adult education concepts into traditional curriculum systems.

LIMITATIONS OF FUNCTIONAL COMPETENCY DEFINITIONS

All of these comprehensive or specific efforts toward defining functional competency have their weaknesses. As noted by Fischer, "a specific competency is rarely applicable to all people. Geographic location, sex, age, ethnic background, life stage, and other factors affect both the individual and social perception of necessity" (Fischer 1979, p. 148).

As the most publicly visible and the only national research-based study, the APL study has generated considerable controversy and thus heightened educator and researcher concerns for validation of functional competencies for specific regional or clientele groups. Although most educators endorse the generic concept of APL functional competency, several critics have questioned the specific composition of objectives in the APL study, its application to disadvantaged adults, and its middle-class value bias (Griffith and Cervero, 1977; Fischer, 1979; Cervero, 1980; Nyer, 1979). For example, in research analyzing self-perceived needs of New Jersey adult basic education (ABE) students, Flaherty noted that students, on the average, wanted to learn about 59.6 percent of the APL competencies. Students with the lowest reading levels expressed more interest in competencies that involved basic reading skills. Occupational knowledge and consumer economics knowledge areas were identified by students as having highest priority, whereas health and community resources knowledge areas generally held lesser interest for students (Flaherty 1978). Other functional competency models also suffer

from similar problems regarding their relevance to disadvantaged adults and their universal application.

In summary, CBAE programs are grounded in a specific set of functional competencies that define the content and focus of the learning process. However, the concept and application of functional competencies differ among programs, among clientele groups, and - potentially - among individual learners. These differences have a significant impact in judging the CBAE effort.

THE SCOPE OF COMPETENCY-BASED EDUCATION SYSTEMS

Competency-based adult education has been incorporated into adult education programs throughout the United States. The Department of Education's Division of Adult Education indicated that in 1977-78 forty-three states were sponsoring 153 separate CBAE-related special programs during the fiscal year with a total investment of approximately $8 million (Profile of the States, 1978). During fiscal year 1979, Clearinghouse for Adult Education and Lifelong Learning (ADELL) identified special adult functional competency projects in forty-seven states with a total funding of approximately $7 million (Fiscal Year 1979 Fundings for Adult Functional Competency Projects, 1980). The latter does not identify three traditionally-funded programs that also have incorporated CBAE into their outreach efforts but are not now receiving special funding. For example, they do not represent the twelve APL pilot high school diploma program sites in Texas or the Oregon CBAE Community College High School Diploma Program.

Competency-based education encompasses a wide range of activities and programs. The scope of these efforts can be categorized by the functional characteristics of the CBAE program in relation to current adult basic education activities. In examining CBAE programs, the three major systems include (1) credential-oriented systems, which have external and nontraditional high school diploma programs; (2) linkage systems which may incorporate Adult Basic Education, English as a Second Language, prevocational and/or vocational education, pre-GED and/or GED programs, or job readiness programs, and (3) adaptations systems, which focus the functional literacy CBAE approaches to service special populations.

CREDENTIAL-ORIENTED SYSTEMS

In November 1978, twenty-three states reported CBAE high school diploma programs in development or operation at ninety different sites (Nickse, in press). Although there are significant variations among these state and community competency-based adult education diploma programs, all programs follow one of three basic schematic models:

1. Focused assessment model
2. Combined assessment and curriculum model
3. Combined model of assessment, alternative resource learning, and Carnegie unit certification

Focused Assessment Model

This model is created to assess - not to teach - functional competencies. As a basic premise, it is assumed that adults are able to select and utilize a variety of learning resources and appropriate learning styles to gain competency. This model further assumes a variety of learning resources within the community setting. Programs with this model provide an applied performance assessment system with counseling/educational brokerage services to both define current level of competency and diagnose areas for future mastery of competency. As appropriate, they share resources and help possible alternative community/family agencies to gain knowledge and skill. The final transcript and high school diploma show a verified demonstration of competence as the sole criterion for the awarding of a high school diploma. There is no specified instructional curriculum and no linkage with traditional Carnegie unit-based diploma programs.

This model is exemplified by the New York State External High School Diploma Program. It awards the diploma based on the demonstration of competency in sixty-four basic skills plus demonstration of (1) occupational skills, (2) college readiness, or (3) special skills. Now located in six sites, this external diploma program is funded by the New York State Education Department. Between March 1975 and June 1979, 2,100 adults received their high school credential. As of June 1979, over 1,300 persons were enrolled in the program (Nickse, in press).

Combined Assessment and Curriculum Model

This model was created as a comprehensive process to both assess functional competencies and to provide a curriculum for mastery of competencies with final certification in the form of a high school diploma. Philosophically, this model has a defined

structure of functional competencies, individualized and varied instructional experiences in developed sets of learning resource materials, and a pre/post assessment system. As with the focused assessment model, there is no linkage to Carnegie-unit certification.

The model is exemplified by the Texas APL Competency Based Diploma Program. This program awards the high school credential for demonstration of a satisfactory score on each objective of American College Testing Program's APL Content Area Measures, successful demonstration of a series of life skills activities, and demonstration of (1) marketable job skills, (2) college or vocational school readiness, or (3) demonstration of skills in home management/maintenance. Within Texas, this program has awarded over 1,000 diplomas and currently has approximately 1,300 candidates (Shelton, 1979).

In addition to the APL high school diploma program, California is currently designing and implementing the California Competency Based Adult Diploma Program (CALCOMP). This project is creating competency achievement packets (CAPs), which will assess and teach functional competencies in a total assessment and curriculum model. Currently pilot tested in the Los Angeles Unified School District, this CBAE diploma model will be incorporated into other adult education programs in California (Tibbetts and Westby-Gibson, 1979).

Combined Model of Assessment, Alternative Learning Resources, and Carnegie Unit Certification

High school diploma programs in this model are "hybrids," drawing upon both traditional secondary education certification and upon present learning resources in adult education programs, while also incorporating innovative structures of functional competencies, assessment systems, and alternative learning instructional modes. Several of the state and local district programs in this model group have incorporated credit for prior life and educational experiences in relation to program-defined functional competencies. All of the programs in this model have translated the mastery of functional competencies into academic credit or Carnegie units.

There are three major programs which, at present, characterize this model - the Oregon Adult Diploma Program, the Massachusetts New Bedford Adult Diploma Program, and the MAECOM Adult Diploma Program in New Jersey. Each of these three programs that was cited above has incorporated the CBAE process in unique ways while at the same time conforming to local educational environments. Each program varies dramatically in its forms of instruction (from formal required classes to mentor-facilitated

independent learning approaches) and in its assessment processes (from standardized basic skills tests to life experience portfolio documentation). The three basic models characterize the major variations in CBAE credential-oriented programs. For further comparison of four of the above alternative adult diploma programs, the following chart (Table 2) outlines each program in relation to certification requirements, types of instructional modes, type of assessment activities, type of documented prior learning activities as applied to the competencies of the diploma program and other pertinent features.

TABLE 2
FIVE-STATE COMPARISON OF ADULT ALTERNATIVE PROGRAMS

PROGRAM	CERTIFICATION REQUIREMENTS	TYPE - INSTRUCTION	TYPE - ASSESSMENT	DOCUMENTED TYPE-PRIOR LEARNING
MASSACHUSETTS New Bedford Adult Diploma	1. 16 Carnegie units including U.S. History (7 required, 9 elective) 2. High School level reading achievement 4 cr. 3. Math achievement - 2 cr. 4. Writing and grammar achievement 5. one term enrollment (+ - 12 weeks)	classes special tutoring independent learning self-paced	standardized tests; documentation of life skills in 11 areas; employment, training program, home management, travel/sports/rec; family/health ed; fine arts; practical arts; volunteering; language; military; ind. project	life skills options in 11 areas (9 credits total)
NEW JERSEY MAECOM Adult Diploma Program	1. 80 credits, inc. U.S. History 2. 10.5 grade level in reading, math, and English	formal classes self-instruction on job training mentor-learner instruction independent self-paced instruction	product and performance assessment; oral and written exams	work exp. 10 cr; military, 10 cr; apprentice ± 30 cr; special skills 5 cr; formal course work 1+ cr.
OREGON Adult Diploma Program	1. 21 Carnegie credit requirements (11 required, 10 electives) 2. Competence in 10 life skills areas 3. Attendance one semester full-time or two semesters part-time	college classes in high school subjects voc. ed independent learning	all types of standardized tests; projects; independent learning	life experiences (special skills); work experience (inc. Military); course work; correspondence, technical, etc.)

TABLE 2
FIVE-STATE COMPARISON OF ADULT ALTERNATIVE PROGRAMS, Con't.

PROGRAM	CERTIFICATION REQUIREMENTS	TYPE - INSTRUCTION	TYPE - ASSESSMENT	DOCUMENTED TYPE-PRIOR LEARNING
NEW YORK STATE				
External High School Diploma Program	1. 64 basic skills in communication, computation and life skills awareness: in self; social; consumer; scientific; and occupational preparedness plus 2. Occupational skills; or college readiness; or special skills	NO INSTRUCTION: learners use community resources and family independent learning w/learning prescriptions self-paced instruction	Take-home exams; diagnostic exams; self-assessment; oral interviews; applied performance tests	special skills; occupational skills
TEXAS				
APL High School Diploma Program	1. Pass adult performance level test (APL) 2. Demonstrate life skills 3. Occupational or post-secondary school readiness; or home mgt/ maintenance	All types instruction: (class independent); APL curricula used All individual and self-paced	APL test; product assessments; occ/voc	occupational skills including military

Source: Nickse, 1980. (with modifications)

LINKAGE CBAE SYSTEMS

In addition to the major emphasis of recent CBAE activities in alternative high school diploma programs, many CBAE concepts and processes are also being incorporated into other adult education program efforts. Linkage CBAE systems are programs of Adult Basic Education, English as a Second Language, prevocational/vocational education, and pre-GED/GED programs that integrate traditional subject matter within a CBAE process and framework. Many of these programs were initially attracted to CBAE because of the potential infusion of functional literacy concepts. In a comparative six city research project of adult basic education, it was observed that teachers had seldom incorporated life skills into their instruction (Mezirow, Darkenwald, and Knox, 1975). In a focused research investigation of adult basic education instructional practice, it was noted that those teachers who do emphasize life skills with disadvantaged adults have lower dropout rates among their students (Darkenwald, 1975). In a Louisiana research study of comparative groupings of traditional and APL instruction in adult basic education, students in the APL instruction groupings not only had greater test score changes in life coping skills, but also demonstrated a higher overall retention rate Dauzat, 1978a, 1978b; Report of the USOE Invitational Workshop on Adult Competency Education, 1978. This infusion of life skills into adult education classrooms appears to offer a more relevant and attractive learning experience with possible positive impact on student retention rates.

Adult basic education programs, those programs that traditionally have provided instruction to the illiterate adult up through the eighth grade level of skills and knowledge, have found significant value in CBAE. These programs often are not total systems with the ability to provide a form of certification at the point of mastery of competencies, but rather linkage on feeder systems that (ideally) provide sufficient instruction to bring the adult's knowledge and skill to the level of entry into a vocational, GED preparation, or high school diploma program. These programs, focused on basic skills development, utilize functional life-coping skills as a point of orientation and a set of designated competencies as a framework of instruction (Royce, 1979). ABE-CBAE programs are extremely variable in scope as can be demonstrated by the Lancaster-Lebanon, Pennsylvania Program which welded together a competency-based adult education program using elements of CETP (the Community Action Program (CAP) Employment-Training Program), the Adult Learning Resource Center model as practiced in a variety of states, and the modified ABE program with life skills instruction as taught in Louisiana and Worcester, Massachusetts.

English as a second language (ESL) instruction is also making significant headway in the CBAE area. Faced with cultural and language barriers, the clientele of these programs typically lack basic literacy skills, an understanding of the English language, and functional competency. ESL-CBAE programs have combined the ESL orientation regarding development of English grammatical and speaking structures with instructional focus on functional competency and life-coping skills (Keltner & Howard, 1979). As with ABE instructions, these programs attempt to integrate their efforts into a linkage system towards an ABE, GED, vocational education, or high school diploma program. Key examples of developing programs include the California-San Diego ESL program, the Illinois efforts in Schaumberg and Kishwaukee, and the New Jersey program at Jersey City College. Each of these projects has made significant contributions in reorienting curriculum, developing appropriate materials, and redirecting instructional activities toward a functional literacy CBAE effort.

Beyond ABE and ESL programs, other adult education areas are linking functional literacy concepts and CBAE processes to their instructional programs. Pre-GED and GED preparation instructional programs are incorporating life-skills curriculum with traditional skill and knowledge development. Vocational education programs are also modifying their curriculum to CBAE processes, and several CBAE adult education programs are combining their focus with Comprehensive Employment Training Act/Work Incentive (CETA/WIN) programs and displaced homemaker groupings (Kasworm and Lyle, 1979).

ADAPTATION SYSTEMS

Beyond major program investments in CBAE, numerous pilot projects are adapting the philosophy and concepts of functional competency, competency-based approaches, and/or variations of CBAE high school diploma programs to special population groups. For example, the APL curriculum has been successfully integrated into the correctional education program at Windham School District (the education program for the Texas Department of Corrections). The Missouri State Corrections Systems and the Illinois State Corrections Program have also utilized APL approaches in ABE/GED programs (Pierce, 1979). The Adkins Life Skills Program, a competency-based program oriented to employability life skills, has been utilized in a variety of settings with New York State welfare clients. Comprised of ten multimedia units, the Life Skills Program incorporates affective, cognitive, and behavioral components to assist disadvantaged adults in selecting, locating, gaining, and

retaining jobs (Reise et al., 1978).

Adult educators are initiating, designing, and implementing CBAE programs, curriculum, and instructional components for other greatly underserved groups, such as the mentally retarded, occupationally or physically disabled, the learning disabled, the elderly, and the homebound or institution-bound adult. In addition, adaptations of curriculum and research into "culture-bound" functional competencies are also being considered for groups of Eskimos, Native Americans, and inner-city youth. These activities are in the beginning stages of growth and hopefully, in future years, will offer exciting additional components to the CBAE scene.

The scope of current CBAE activity is quite diversified. Its application ranges from total high school diploma programs, to linkage efforts with current educational systems serving disadvantaged adults, to special adaptation systems of pilot projects oriented toward special-need populations. Although there are a few major innovative programs that have created a new CBAE system in adult education, the majority of activity in the field is focused on adapting or linking the concepts and processes of CBAE within current program efforts.

TEACHING/LEARNING STRATEGIES

With the development of competency-based adult education as a process and as a program structure, teaching and learning strategies in the adult education classroom have taken on new dimensions. Those areas that have experienced the most profound impact include (1) assessment procedures and materials, (2) curriculum materials development, (3) expansion of alternative student learning systems, and (4) recordkeeping and documentation systems.

ASSESSMENT PROCEDURES AND MATERIALS

Although adult literacy education has always dealt with the need for student entry assessment of abilities in relation to educational goalsetting, CBAE places major emphasis on assessment. The quality and outcome of the educational experience is assumed to be directly identified by the nature and the scope of the assessment system. Competency-based adult education is perceived to be a relatively lame notion without relevant and proper pre- and post-assessment procedures linked to measurement of competency.

Many CBAE programs in their pre- and post-assessments combine traditional skills tests, such as the TABE (Tests of Adult Basic Education) or the GED, in combination with other examinations of life skills competencies. Due to the research-based development of the APL curriculum and assessment project, programs that are grounded in the APL or APL-related curriculum or that desire a developed paper and pencil assessment instrument predominantly use the American College Testing Program APL Survey and Content Area Measures

(Mann, 1979). CBAE programs that have drawn their focus from a non-APL research base regarding functional competencies have typically developed their own written functional literacy assessment instrumentation.

Beyond these written forms of assessment, a few programs (e.g., New York and New Jersey diploma programs) also have integrated life skill performance indicators. Philosophically, CBAE programs generally support the concept of relevant life skills in combination with an "action orientation." Performance outcomes are believed to be more credible and valid by the act of doing. If it were economical and feasible, several CBAE programs would prefer final competency to be demonstrated by real-life or simulated application performance. For example, in the New York State External High School Diploma Program, proficiency in the stated competencies is assessed through five major task assignments that require application and integration of skills to adult-related activities, such as selecting an appropriate apartment (Nickse & McClure, in press).

CURRICULUM MATERIALS DEVELOPMENT

The implementation of a CBAE system requires a reexamination of current teaching-learning resources and, depending on the program, the development and/or adaptation of materials and teaching aids. Many CBAE programs, in collaboration with publishers, have created new materials that provide both basic skills development and a life skills orientation within the framework of lesson units. These materials are becoming sufficiently diversified to provide programs with alternative selection of materials. For example, these materials include: Cambridge's Reading for Survival series, PAR's Label packets, Pitman Learning's Ablest Readers and Lifeline series, Harcourt Brace Jovanovich's The APL Series, McGraw-Hill's Lifeworks, and soon to be published by Pitman Learning, the Competency-Based Life Ability Skills (CLASS) project modules produced from the CALCOMP project in California. In addition to these new written materials, several programs have developed audiovisual resources. Key examples include a videotape series entitled "Just Around the Corner," developed by the Mississippi Authority for Educational Television in cooperation with Cambridge Book Company; the Life Skills Stimulus Video Tapes and Teacher's Guide from the New England Regional Life Skills Advisory Board; slide-tape and cassette tape productions from the APL curriculum; and numerous other filmstrips, slides, and transparencies developed from many 309/310 curriculum/ materials development projects. Both the written and audiovisual resources offer CBAE programs functional literacy materials oriented to the development of both basic and life coping skills.

ALTERNATIVE LEARNING SYSTEMS

CBAE assumes a teaching-learning environment that not only accommodates, but supports the notions of flexibility, open entry/open exit, and varied learner skill and knowledge levels. Individualized instruction can no longer be just a motto. CBAE places teachers into the role of actually implementing individualized instruction. This emphasis on individualized, personalized instruction is directly related to the variety of strategies and materials available for learners. CBAE teachers assume a stronger facilitative role, with the ability to select alternative methodology, processes, and materials for individual student needs. Further, CBAE programs attempt to develop self-directed learning skills to allow the student to make greater use of independent and mentor-facilitated learning systems. More traditional teacher-controlled modes of didactic instruction are used much less often. Because of this orientation, the learning center concept has become one of the more desired program structures for linking the philosophy of a CBAE process with the reality of implementing it in a more holistic fashion (Adler, 1979). Although many CBAE efforts presently do not incorporate a learning center approach, steady growth in CBAE and additional instructional resources will provide the necessary support and make this mode much more feasible. In addition, other varied instructional environments will be adapted for more personalized educational experience.

Because of the functional literacy orientation, many CBAE programs are experimenting with systematic usage of community resources in understanding and integrating basic and life skills concepts. CBAE programs are drawing upon the community for various printed, graphic illustrations of life skills applications in addition to on-site demonstrations, field trips, and student participation in learning-by-doing in the community. These linkages are providing disadvantaged adults with an understanding of life skills and are helping them to apply these life skills in a relevant way in their daily activities.

RECORD KEEPING AND DOCUMENTATION

Because of the significant role of assessment in the CBAE process, record keeping and documentation are important program components in the diagnosis, prescription, and validation of competencies for students. CBAE programs, like traditional adult education programs, have developed record file systems to guide teacher-student activity. A CBAE file typically includes documentation of the student's assessed level of basic skills in

the areas of reading, writing, language, and mathematics. These skill diagnostic statements describe either the student's current level of need for further basic skill development or the mastery of basic skills. In addition, the file also provides a composite breakdown of the present assessed level of each functional competency and component objectives of the student. In APL-related programs, the file may also include a student interest form, which notes the priority of student interest in each of the functional competencies. For example, a student may have noted a desire to learn first about counting money or how to do comparison shopping. Information on (1) basic skills levels, (2) functional competency skills levels, and (3) student interest provides the key information for development of an individual program of study. The file is set up to note the entry level and the on-going progress of the student in both basic skills and functional competency areas. Certain CBAE programs also provide a progress chart or life skills portfolio for student use. This chart or file notes the total number of completed functional competencies or individual documentation of accomplished life skills. Students check off or incorporate proof of completion as they progress in fulfilling each competency or post-assessment measure.

A few alternative high school diploma programs have also established a documentation system of credit for prior life experiences or credit for life experiential learning, the former oriented to activities prior to entry into the program and the latter to activities demonstrating current knowledge and competence. Programs that give credit for life experiences utilize trained diploma assessors as well as community professionals who evaluate the student's experiential learning in relation to the number of credits to be awarded for educational activity. This assessment occurs at key points in the student's program. Although record keeping is predominantly an instructional management concern, documentation of competency in relation to academic or Carnegie unit credit is a significant instructional decision-making process. At the present time, both traditional educators and CBAE instructional staff are raising serious questions regarding the validity and credibility of relating concepts of functional competency to academic or Carnegie units of educational credit.

These four designated areas - assessment, curriculum development, alternative learning systems, and record keeping/documentation - represent areas currently experiencing the most significant scrutiny and adaptation for the CBAE process. A few of these areas may appear to be peripheral to the core instructional process. However, the very nature of the CBAE instructional process involves diversity oriented to the needs of students and features a more flexible entry/exit system. Control is provided through appropriate assessment processes and documentation/record keeping systems.

ADMINISTRATIVE TRENDS AND ISSUES IN COMPETENCY-BASED ADULT EDUCATION

Competency-based adult education has initially proven to be a complex series of adaptations. In fact, most states and local adult education groups have given serious, long term examination to the inclusion and development of CBAE components into their current efforts. Change agent leadership, modifications of administrative structures and staffing patterns, adaptation of fiscal and reporting procedures, and infusion of knowledge and skills into existing staff present the major challenges to administrators.

A CBAE effort represents both a process and structure oriented to functional competency outcomes. Philosophically and programmatically, both the personnel and the instructional supports must reflect and support the focus. At present, few programs have committed their total efforts toward CBAE. As a development of the last six years, most programs are in a stage of initiation, creation, pilot-testing, and preliminary refinement. Key trends have been observed in state-funded efforts, staff development, and dissemination projects in CBAE. However, the acceptance and long-term inclusion of CBAE is being scrutinized carefully by decision-makers with regard to benefits and costs.

STATE ACTIVITY IN CBAE

Several states have been strong advocates for development of CBAE pilot programs and the adaptation of CBAE to their adult education programs. Major state and local leadership has come from New York through its external high school diploma and life employability skills programs. California has developed several efforts including a state survey of basic

educational needs (California Adult Competency Survey); competency-based adult diploma program (CALCOMP) and related materials (CAPS); an information, collection, dissemination, and evaluation service (ICDES) in curriculum materials; and a process model of staff development (California Adult Competency Education Project). Texas has supported APL curriculum development, CBHSD (Competency Based High School Diploma Program) pilot site activities, and staff development projects in CBAE and CETA/CBAE linkages. In addition, New Jersey is presently in the preliminary stage of a state plan for development and implementation of CBAE. North Dakota has had several noteworthy activities in an instructional materials clearinghouse and homebound instruction. Louisiana has provided important research into the adaptation of APL for use in traditional programs, and Illinois and Florida have both evolved models for staff development in CBAE. Many other states have recently supported projects that have expanded the CBAE focus to special adult groupings; high school diploma alternatives; instructional/staffing alternatives; and linkage with CETA, Aid to Dependent Children, vocational-technical programs, and community colleges.

STAFF DEVELOPMENT FOCUS

Key emphasis in these new state and local endeavors has been the development of a program and a "people" commitment to the CBAE effort through staff development activities. Until personnel can both support and perform the CBAE process, administrative efforts towards CBAE will require enormous energy with little positive outcome. Staff development activities must incorporate the following elements:

1. AWARENESS - Staff must have both knowledge and attitudes that reflect the CBAE process. Most staff development programs have some form of presentation of key features of CBAE, differences between CBAE and traditional approaches, and discussions of current learner needs as they relate to functional skills. This level is primarily concerned with gaining understanding, positive attitude, and a commitment to learning about CBAE.

2. KNOWLEDGE - This level is focused upon content and skills sessions dealing with concepts of functional literacy, competency-based processes, learner outcomes, individualization, personalization, assessment and counseling,

key teacher and assessor behavior, and competency-based materials and curriculum. Teachers and administrators cannot easily change their efforts without some form of information and feedback, practice, and reexamination of their efforts.

3. ACTION - This third element is typically a pilot program activity that provides demonstration groups for other staff. It eventually leads to broad application into the mainstream programs. As with the focus on knowledge, the action/application area also requires a recycling effort to examine teaching practices, instructional materials, and assessment procedures for greater refinement.

Many of the staff development programs in CBAE not only present the idea of competency-based education, they also are structured in a competency-based format. One example of this type of effort is the Learning Modules for Adult Educators, developed by Texas A&M University. In addition, other states are also utilizing competency-based processes for professional staff development (Gardner and Burrichter, 1979).

COSTS VERSUS BENEFITS OF CBAE

Administration concerns of a CBAE system always include questions of program accountability, accreditation acceptance, and staff/materials development. However, the most crucial of all these issues typically focuses on the financing or cost of a CBAE system. Of these issues, money constraints are often perceived to be the most pronounced barrier for major program innovation. Many decision makers are wary of a CBAE effort because of unknown costs in human and financial resources for equally unknown future outcomes.

As with any major innovation in a program of instruction, there will be certain new costs. These costs typically are seen "on the front end" of the process. They include staff development efforts; the development, adaptation, or purchase of curriculum materials; establishment of an assessment system (through teachers, counselors, or assessors); initial administrative monitoring and research of activity outcomes; potential adaptation of physical site to accommodate a more individualized learning effort; and administrative time to create and implement this innovation into an ongoing program of instruction. In addition, human resources may also be required to create or negotiate (as appropriate) a competency-based

high school diploma model appropriate to state/local requirements. These costs appear to be a significant investment. What is not apparent, however, is the positive impact of CBAE in relation to the ongoing costs of a program. As will be presented in the research section, several studies have demonstrated that CBAE programs generally have a higher retention rate of students than traditional instructional programs have. The New York External High School Diploma Program reported only a 19.5 percent dropout rate from completion of the diagnostic process through the award of the diploma. The APL project reported an 80 percent completion rate of its diploma program in 1975-76 and a 77 percent completion rate in 1976-77 (Fischer, 1979). In addition to the higher retention rates in these diploma programs, the Louisiana comparative study of ABE students in traditional basic skills and life skills instructional settings reported a higher retention rate and greater test scores on the CAT (basic skills) for the experimental life skills instruction group (Fischer, 1979).

Although it is impossible to document differences statistically, the CBAE approach could cut down the time and effort formerly required in certain types of instructional activities. These savings would be due in part to the focus on assessing current student level in skill and content areas and providing a more accurate matching of curriculum with learner level. Also, the instructional approach provides opportunities for students to learn from the community, friends, and family beyond the classroom environment in a focused learning effort. Thus learners can be more independent of the traditional instructional classroom activities. In addition, the CBAE system is a performance outcome system that can be easily communicated in public relations efforts, can be modularized to link with other programs serving disadvantaged adults, and can thus be incorporated into other forms of services that rely on external funding, such as CETA.

Other administrative concerns surround the open entry/open exit, individualized instruction, and competency assessment orientation. These areas of CBAE do not fit into traditional practices of adult basic education programs. For example, present data collection procedures assume a grade level orientation. State and federal report forms require categorization of student participation and their progress through grade skill-level descriptors. CBAE programs do not conform to these programmatic requirements. Fiscal accountability is another difficult area to translate into a CBAE framework. When a local or state program requires an ADA (average daily attendance) or quarterly or yearly count of student numbers, reporting difficulties are bound to occur because the CBAE system does not hold traditional classes of a certain duration. Thus, matching up financial support with documentation of instructional activity

becomes a test of an administrator's ingenuity. Further, CBAE processes place emphasis on assessment, an activity presently not recognized by funding support.

In many respects, major administrative adaptations to a CBAE program have as yet not been defined or created. As more CBAE programs evolve and state adult education programs remove CBAE from a pilot status, more significant adaptations and (hopefully) more creative responses will be seen in the CBAE administrative sector.

CURRENT STATE OF RESEARCH IN COMPETENCY-BASED ADULT EDUCATION

From the first definition of functional literacy and competency-based programming to the development of the New York External High School Diploma Program in 1973 and the official research findings of the APL Project in 1975, adult educators have raised a series of questions concerning CBAE. At this time, three major questions surround the nature of CBAE and its future implications for practice.

WHAT IS COMPETENCY?

One key question focuses upon the nature of competency. As noted by Fischer (1979) in her discussion of approximately sixteen studies, a variety of studies have examined both the APL and alternative definitions of functional competencies for adults. The outcome of these sixteen state and regional studies, though limited, brings no consensus on one specific, finite list of adult functional competencies. Rather, it notes some similarities among certain functional skills thought to be needed by adult population groups. Other studies note various differences in perceptions among teachers, students, and administrators in defining necessary functional competencies. These studies also note student differences in priority ranking of competency needs and the relationship between basic skills and life skills. This variability is well described by studies in New Jersey (Flaherty, 1977, 1978), Pennsylvania (Lindsay and Neid, 1977; Lindsay, n.d.), and the Southeast (Fisher, 1978). Each study requested the participating groups to rank the five APL knowledge areas. The Pennsylvania study of students and staff noted a general agreement that occupational knowledge was of greatest importance; consumer economics was rated next in importance. The Flaherty study

found that occupational knowledge and government and law (in that order) were the two knowledge areas chosen by the highest percentage of students as areas they wanted to learn and believed it necessary to learn. The Southeast study noted that administrators ranked consumer economics and government and law as the first and second most important content areas, whereas teachers and students ranked health and consumer economics as first and second in importance. These studies, in combination with other research, point to continued variations in perceived need and definitional orientation to functional skills (Fischer, 1979; Flaherty, 1977).

It has been suggested that no one universal listing of functional competency is appropriate. Variations in conceptualizing and defining functional competency are in part linked to the learner's sex, ethnic group, educational level, and geographic location. In addition, functional literacy may not be just a two-dimensional concept (skills and knowledge); some researchers are suggesting that it is a multi-dimensional model that incorporates learner characteristics, life orientations, and cohort representation. Thus, if a CBAE process is as valid as its functional competencies, educators must accept the limitations of any definition of functional competency and its broad application to diverse adult learners.

MEASUREMENT OF COMPETENCY

The second key question in current CBAE research is focused on the ability to measure competency adequately. At present, most assessments of functional competency are paper-and-pencil objective tests. The most widely used form, APL Survey & Content Area Measures, developed by American College Testing Program, offers an efficient and objective instrument for functional competency measurement. However, the measures and their reliance upon the original APL research have drawn criticism from Griffith and Cervero (1979), Flahery (1977), and Cervero (1980), regarding their relation to reading skills, to educational attainment, and to family income/wage earner's income.

Many CBAE educators such as Fischer (1979) note the importance of applied performance tests in demonstrating mastery of functional competency. However, at this time there is no published set of performance indicators, and research regarding the relationship of test scores on objective tests to actual or simulated performance levels is lacking.

This particular concern of measurement of competency raises the most significant questions for the reliability and validity of

a competency-based instructional effort. Until major research funding is directed toward examining alternatives of competency assessment and their relative impact and value in a CBAE instructional effort, these serious dilemmas will continue.

IMPACT OF CBAE

The impact or effect of CBAE instruction is the third major concern for researchers and for adult education practitioners. Due to CBAE's new status, there are obvious concerns for the Hawthorne effect in evaluating CBAE instructional effectiveness. However, as reported by Fischer (1978, 1979), programs in Louisiana, New England, Illinois, Alabama, and New Hampshire each reported positive and significant gains in student APL Survey performance after CBAE instruction. Louisiana reported that the gains on both basic skills and the APL life coping skills were significantly higher for those students receiving APL instruction as opposed to a control group receiving traditional ABE instruction (Fischer, 1979b). Fischer also notes key qualitative data in CBAE instructional efforts. Students reported they "felt more capable and confident in handling various life situations" (Fischer, 1979). Further as reported by Louisiana, New York, Texas, and Iowa, students in life skills instruction had a higher rate of retention than did those in general basic skills tracks.

These three basic questions facing CBAE research speak to the current state of the art. CBAE has only been in existence for six years, and much of the present activity is relatively recent. While there is preliminary evidence to support the value of functional competency and relevance in a CBAE approach, these three serious questions will have strong, significant effects on the future of CBAE as an efficient and effective total instructional process.

SUMMARY

Competency-based adult education (CBAE), as a relatively new educational process in adult basic education, can be identified by a number of elements. These elements in an ideal CBAE state include identified outcomes, pre- and post-assessment, functional literacy content, certification of mastery, variable instructional processes, and an adult learner orientation. The foundation of this CBAE process is based upon a definition of functional competency for the adult. This specification of competency determines the scope and depth of prescribed competency outcomes for the CBAE process. Currently, there are three major models of practice and a variety of specialized functional competency research efforts. Each of the varied structures and processes of a CBAE program are significantly influenced by the specific definition and concommitant application of functional competency concepts.

The majority of state adult education divisions support and fund some form of CBAE activity. These activities include either major programmatic efforts in alternative high school credential programs; linkage programs that incorporate CBAE with ABE, ESL, pre-GED/GED and prevocational/vocational education; or adaptation programs in which functional literacy CBAE approaches are focused on special populations.

A number of instructional and administrative concerns have been generated in adapting adult basic education programs to CBAE. Those instructional areas that have experienced the most profound impact include assessment systems, curriculum materials development, alternative learning systems, and documentation/record keeping systems. Within the administrative area, there have been major efforts providing leadership in the instructional program, in staff development for dissemination, as well as serious examination of the financial investments and necessary modifications for effective

administrative and instructional practices to support a CBAE function.

Because of its relatively new status, research has examined the nature, scope, and impact of CBAE to only a limited degree. Most of the studies have attempted to define and specify functional competencies or have examined the impact of CBAE on student skills and retention. At this time, only a generalized set of commonly perceived functional competencies exists along with a wide variety of other specialized competencies unique to the learner, geographic region, or research focus. Studies investigating CBAE impact have generally noted significant positive gains on life coping skills tests and higher retention rates than those achieved by students in basic skills instruction.

Competency-based adult education presents a range of new and enriched opportunities in adult basic education programs. The many facets of CBAE processes and structure will require the development of a practitioner-researcher partnership. The next ten years should witness the implementation of innovative and effective instructional strategies for adult learners.

APPENDIX

To assist in further exploration of competency-based adult education, the following is a beginning list of potential resources:

PROGRAMMATIC RESOURCES

A. Contact Persons for Further Information

National Overview

Mr. Jim Parker
Division of Adult Education
U.S. Department of Education
Washington, D.C.
202-245-9751

Competency-Based High School Diploma Programs

MAECOM - Monmouth Adult Education Commission
Mr. Thomas Niles, COordinator
1 Main Street
Eatontown, New Jersey 07724
201-542-3224

The Adult Performance Level (APL) Competency-based High School Diploma Program
Ms. Elaine Shelton
Division of Continuing Education
Education Annex S-21
University of Texas at Austin
Austin, Texas 78712
512-471-4623

New Bedford Adult Diploma Program
Mr. John Borowicz, Director
181 Hillman Street
New Bedford, MA 02740
617-999-3012

Competency Based Adult Diploma Program
Ms. Colleen Owings
Chemeketa Community College
P.O. Box 14007
Salem, Oregon 97309
503-399-5093

New York External High School Diploma Program
Ms. Judy Alampres
Regional Learning Service of New York
405 Oak Street
Syracuse, NY 13202
312-425-5252

CBAE-ABE Programs

Dr. Sherry Royce
1110 Enterprise Road
East Petersberg, PA 17520
717-569-7331

Worcester Adult Learning Center
014 Worcester Center
Worcester, MA 01608
617-752-7700

Helen Borque
Saco Adult Learning Center
35 Spring Street
Saco, Maine 04072

Mary Jo Westwood
Columbia Public School Adult Learning Center
310 Providence Road
Columbia, MO 65201
314-449-8421

CBAE-ESL Programs

Ms. Autumn Keltner
ABE/ESL Programs
Adult and Continuing Education
San Diego Community College District
5350 University Avenue
San Diego, CA 92105
714-280-7610

Ms. Helen Gault
Piedmont Tech
Drawer 1208
Greenwood, SC 29646
803-223-8357

Ms. Lucy Stromquist
St. Vrain Valley Public School
School District RE-1J
395 S. Pratt Parkway
Longmont, CO 80501
303-772-6161

Robert Ryan
Editor, APL/ESL Newsletter
Adult Basic Education Program
Kishwaukee College
Malta, Illinois 60150

Adult Education Resource Center
Jersey City College
2039 Kennedy Boulevard
Jersey City, New Jersey 97305

Research and Issues in CBAE

Dr. Norvell Northcutt
Director of Research
Southwest Educational Development Laboratory
211 East 7th Street
Austin, TX 78701

Dr. Joan Fischer
Institute of Community Services
Worcester State College
18 Chicopee Street
Worcester, MA 01602
617-752-7700

Dr. Paul Taylor
CCNY
School of Education, Klapper Hall 109
135 St. and Convent Avenue
New York, NY 10031
212-690-6741

Dr. Ruth Nickse
58 Monmouth Street
Brookline, MA 02146

Dr. Carol Kasworm
Department of Curriculum and Instruction
University of Texas
Austin, Texas 78712
(512)-471-4285

B. Competency-Based Adult Education Bibliographies or Products Listings

1. Division of Adult Education
U.S. Department of Education
Washington, D.C. 20202
(Resources for Adult Functional Competency)

2. National Adult Education Clearinghouse
National Multimedia Center
Montclair State College
Upper Montclair, NJ 07043
(CBAE Bibliography--both background and curricular materials)
(The CB Reader - A Guide to Understanding the Competency-Based Adult Education Movement. Price $7.00; including $1.00 handling)

3. Adult Education Center
School of Continuing Education
Indiana University of Pennsylvania
Indiana, Pennsylvania 15705
(Bibliography of Adult Performance Level (APL) Resources)

4. Clearinghouse for Applied Performance Testing
Northwest Regional Educational Laboratories
710 SW Second Avenue
Portland, Oregon 97204
(Annotated Bibliography of Applied Performance Testing and an Annotated Bibliography on Minimum Competency testing)

5. I.C.E.D.S. Project
5350 University Avenue
San Diego, CA 92105
(Competency-based curriculum materials - HEARTBEAT newsletter, sourcebook on functional competency materials)

6. Barbara Korpi
Dickinson Public School District
Dickinson, North Dakota 58601
(APL/ABE Materials for teaching functional literacy in North Dakota Programs)

7. Northwest Regional Educational Laboratories
710 SW Second Avenue
Portland, OR 97204
(general overview - Competency Based Education Sourcebook. Also available: Functional Literacy Bibliography - contact Dr. Beverly L. Anderson, Director, at above address, or at telephone number 503-248-6940).

8. Adult Competency Education Profile
Bureau of Occupational and Adult Education,
Washington, D.C.
April 1977
ED 141 593 - ERIC Document Number
(A compilation of abstracts of 1976-77 Adult Performance Level (APL) and Adult Competency Education (ACE) federally supported projects.)

9. Adult Competency Education Resources
Bureau of Occupational and Adult Education
April 1977
ED 141 592 - ERIC Document Number
(A compilation of brief descriptions of 1976-77 resources for Adult Performance Level (APL) and Adult Competency Education (ACE) programs.)

10. "The CB Connection," Resources for Your Competency-Based Adult Education Program
by James Parker
NAPCAE Exchange

In this one page article the following are noted: (1) ABC's in APL resource book, an annotated bibliography (230 pages, $5.00). Contact: The Adult Performance Level Project, University of Texas, S-21, Education Annex, Austin, Texas 78712; (2) LIFE adult coping skills reading modules by the Alabama Department of Education. Two volume set for $6.00 from the Adult Education Department, 203 Petrie Hall, Auburn University, Auburn, Alabama 36830; (3) Learning for Living instructional modules. Contact: The Adult Education Center, Memphis State University, Memphis, Tennessee 38152. Phone (901) 454-2136; (4) The Clovis APL-based instructional modules. Contact: Elna Dimock,

Clovis Adult School, 914 Fourth Street, Clovis, CA 93612; (5) APL-ACT Survey instruments and content area measures. Contact: The American College Testing Program, APL Department, P.O. Box 168, Iowa City, Iowa 52240.

RESOURCE READINGS IN CBAE

1. Adult Performance Level Staff. Adult Functional Competency-Final Report. Austin, Texas: University of Texas, August, 1977.

2. Parker, J. and Taylor, P. (Eds.) The CBAE Reader: A Guide to Understanding Competency-Based Adult Education, February, 1980. (Eleven articles on CBAE - what it is and how to do it.) Order from -
   Adult Education Clearinghouse
   National Center for Adult Continuing Education
   Montclair State College
   Upper Montclair, NJ 07043

3. Issues of Adult Literacy and Basic Education (203 Petrie Hall, Auburn University, Auburn, AL 36830). Key Issue: Fall, 1979, Volume 3, No. 3: ten articles on various programs, research and application of CBAE. Past issues have had excellent articles on APL and its applications.

4. Boulmetis, John. Competency-Based Adult Vocational Instruction: What Is It? California: Fearon-Pitman, 1980.

5. Kasworm, Carol E. & Buddy, R. Lyle. Proceedings of a National Invitational Workshop on Competency-Based Adult Education. Austin, Texas: University of Texas, 1979. (Overview discussion of component programs in CBAE, Administrative, Research, and Overview issues)

6. Nickse, Ruth S. Assessing Competence: The External High School Diploma. California: Fearon-Pitman, in press.

7. Nickse, Ruth and McClure, Larry (eds.). Competency-Based Education: Beyond Minimum Competency Testing. New York: Teacher's College Press, in press.

8. Parker, James T., and Taylor, Paul G. The Delphi Survey. Belmont, California: Fearon-Pitman, 1980. (Overview of CBAE and a presentation of the Delphi study on issues in CBAE. Excellent bibliography of background materials regarding both competency-based education, and various project reports on aspects of CBAE).

9. Reducing Functional Illiteracy: A National Guide to Facilities and Services. ED 170 511.

10. U.S. Office of Education. Report of the USOE Invitation Workshop on Adult Competency Education, Washington, D.C. 1978. (Excellent key articles from J. Fischer, "A Review of Competency-Based Adult Education," and P. Taylor, "Selected Issues in Competency-Based Adult Education: A Delphi Study.") ED 013 371

11. Information focused on CBAE - Vocational Education:
    a) "Identification and Analysis of Competency-Based Adult Vocational Education Programs. Final Report." January, 1978. ED 153 051
    b) "Proceedings of the National Workshop on Competency Based Adult Vocational Instruction," August 2-5, 1977. January, 1978. ED 153 052
    c) National Directory of Selected Competency-Based Adult Vocational Education Programs. January, 1978. ED 153 049

12. Adult Student Assessment Resource Guide. Adult Competency Based Diploma Project, Los Angeles Unified School District, California, 1979. ED 179 582. Quick reference to choose appropriate assessment instruments for use with adult learners. The instruments are categorized as applied performance tests, norm referenced tests, and criterion referenced tests, and are applicable for adult basic, G.E.D., high school completion, and English as a Second Language assessment. It also reports findings of a statewide assessment survey and provides suggested management techniques for the administration of large and small group testing.

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